

REMARKS

In the Office Action mailed March 27, 2003 in the above referenced pending application, the examiner rejected applicant's claims 19-25 and 27-29 for alleged obviousness under 35 USC 103, in view of multiple asserted combinations of cited prior art references. In addition, the examiner rejected claims 21-25 and 27-29 for alleged indefiniteness under 35 USC 112, second paragraph, with respect to a variety of specific terminology issues identified by the examiner. Claims 19-20, 28 and 29 were also objected to with respect to improper capitalization of the term "Disposable", and the examiner objected to the Abstract for inclusion of the term "means".

In response, applicant has cancelled claims 19-25 and 27-29, and submits herewith new claims 30-44 for consideration. These new claims 30-44 include independent claims 30, 38, and 41. All of the claims 30-44 have been written with the Section 112 rejections in mind, and are respectfully submitted to recite applicant's invention in terms which particularly point out and distinctly claim the invention. In addition, as will be discussed in more detail herein, these new claims 30-44 are respectfully submitted to distinguish clearly and patentably from the cited art.

In addition, by this Response, applicant has amended the Specification at pages 8 and 9 for the purpose of updating the status of the cited patent applications referenced therein.

Objection to the Abstract

Applicant notes the objection to the Abstract for alleged inclusion of the term "means" at several lines thereon. Applicant acknowledges that the Abstract as originally filed in this application included the term "means" at the lines identified by the examiner. This fact was raised by the examiner in a prior Office Action, mailed February 23, 2000.

Upon inspection of the record in this application, applicant's counsel notes that a revised Abstract was submitted with applicant's prior Amendment, filed May 17, 2000. Such revised Abstract removed each occurrence of the term "means". Per the Advisory Action mailed May 25, 2000, the examiner indicated that this revised Abstract would be entered.

Since the above-identified revised Abstract included with applicant's Amendment filed May 17, 2000 is believed to resolve the current objection to the Abstract, applicant has not submitted a further revised Abstract with this Response.

Applicant therefore respectfully requests confirmation that the prior-submitted revised Abstract has in fact been entered, and does in fact overcome the current objection as stated in the Office Action mailed March 27, 2003.

Discussion of the Invention as Claimed

The invention recited in the claims of this application comprises an improved radio frequency identification device in the form of a wristband or bracelet for mounting onto an individual or object to be identified, such as mounting upon a person's wrist. The device includes a disposable "strap" which is retained and supported by a removably mounted "securement

means" in a closed loop configuration encircling the wearer's wrist of the like, wherein this "securement means" additionally carries a "radio frequency identification circuit", or transponder, capable of receiving a transmitted radio signal and responding with appropriate identification information applicable to the person wearing the device.

With this construction, the "identification circuit" can be protectively encased by and within the "securement means" for reliable operation during use, for example, when worn by a patient in a medical facility or the like. The "securement means" additionally provides a structure for retaining and supporting the "strap" in the desired closed loop shape, wherein this "strap" advantageously may be formed from a lightweight, inexpensive, and disposable material such as a plastic strip or the like. In a medical facility setting, upon patient discharge, the device can be removed from the patient, followed by nondestructive disassembly of the "securement means" with the "identification circuit" carried thereby from the "strap". The "strap" can be discarded, but the "securement means" with the "identification circuit" carried thereby can be appropriately sanitized preparatory and then assembled quickly and easily with a replacement strap for re-use. In such re-use, the "identification circuit" carried by the "securement means" can be quickly and easily reprogrammed with information applicable to a subsequent patient.

Accordingly, with applicant's invention, significant cost savings are recognized in comparison with traditional prior art RF identification bracelets and the like, since the costly component in the identification system, *i.e.*, the "radio frequency identification circuit" can be re-used with a large number of successive patients or the like. This "identification circuit" is carried by the

"securement means" which is nondestructively removable from the associated disposable "strap".

New independent claims 30, 38, and 41 all recite applicant's "radio frequency identification device" to include the "disposable flexible strap having first and second opposite ends", together with the "securement means" which is "removably connected to said strap for supporting and retaining said strap in a closed loop configuration encircling" the wearer's wrist or the like. In addition, these independent claims further recite the "radio frequency identification circuit carried by said securement means", wherein the "securement means" and the "identification circuit" are together removable from the "strap" and adapted for subsequent re-assembly and re-use with a replacement strap.

Claim 30 recites this invention in terms having a scope sufficient to encompass both embodiments depicted respectively in applicant's FIGS. 1-2 and 3-4. Claim 38 is specifically directed to the embodiment of FIGS. 1-2, and thereby additionally requires "said securement means and said strap first end" to have interengageable "connector means for removably attaching said strap first end", in addition to the "securement means" defining an "opening extending therethrough for slide-fit passage of said strap second end". Claim 41 is directed to the alternative embodiment of FIGS. 3-4, and thereby additionally recites "a pair of opening" at the "first and second ends" of the strap, and "first and second opposite extremities" on the "securement means" for "interference fit reception" into these strap openings.

Claims 31-37, 39-40 and 42-44 comprise sets of dependent claims which respectively depend from and thereby add limitations to their

respective parent independent claims 30, 38 and 41. Of these dependent claims, claims 33 and 40 recite the "antenna" mounted within the strap and adapted for connection to the "identification circuit" upon assembly of the "strap" and "securement means". Claims 36 and 43 recite details of the embodiment of FIGS. 3-4, wherein the "antenna" is positioned generally "at said first end" of the strap and associated with "indicia" which identifies the antenna location and thereby encourages assembly of the "strap" and "securement means" in a proper operative orientation.

Since the cited art of record in this application is not believed to disclose or suggest applicant's claimed radio frequency identification device, including a "securement means" removably connected to a disposable "strap", wherein this "securement means" performs the dual functions of (i) supporting and retaining the "strap" in a closed loop configuration, and (ii) supporting and protecting the "identification circuit", applicant respectfully submits claims 30-44 for reconsideration and allowance.

Discussion of the Cited References

In the Office Action, the examiner rejected applicant's claims for obviousness in view of three alternative asserted primary combinations of the cited references. These combinations are (i) de Jong, U.S. Patent 4,612,719 in view of Hayes, U.S. Patent 4,178,374; (ii) Ross, U.S. Patent 4,598,275 in view of Peterson, U.S. Patent 5,479,797 and the de Jong '719 patent; and (iii) Peterson '797 in view of the Hayes '374 and de Jong '719 patents.

The de Jong reference discloses a device for mounting an electronic detection element onto the neck or other part of an animal. De Jong's device

includes a holder 1 carrying the electronic detection element 2, and connected to an elongated band 6 which is wrapped about the animal's neck. De Jong discloses several different embodiments, each of which is adapted to adjust the length of the band 6 for appropriate tightening thereof.

However, the de Jong reference is completely silent relative to disassembly of the holder 1 and the detection element 2 carried thereby from the associated band 6, to accommodate re-use of the detection element by re-assembly of the original holder with a different band 6. Indeed, in the various embodiments, as best understood from de Jong's specification, the holder 1 and the band 6 are assembled in a way that precludes any practical nondestructive disassembly for subsequent re-use of the holder and detection element with a different band 6. Instead, if and to the extent that de Jong's holder 1 becomes disconnected or separated from the band 6, it does so by break-off failure of one more components of the holder, thereby rendering the holder unsuitable for subsequent re-use with a different band.

In comparison with the device shown and taught by the de Jong reference, applicant's claimed device requires the "securement means" to be "removably connected to said strap" in a manner wherein this "securement means" is "removable from said strap" for "subsequent assembly and re-use with a replacement strap". This concept is not disclosed, suggested, or contemplated in any way by the de Jong reference which assembles the holder 1 and band 6 in a manner requiring destruction of the holder in order to disassemble the components. Destroyed components are, simply stated, not susceptible to re-use, and would be recognized as such a person skilled in the art.

The Hayes reference does not provide any teaching or suggestion capable of overcoming the above-discussed deficiencies of the cited de Jong reference. Hayes shows an electronic ear tag for cattle or the like, wherein an electronic circuit element 60 is mounted within a housing having an integral sharp barbed tip for one-way piercing passage through the ear of livestock such as cattle. Hayes also discloses an attachment piece 24 for pressed mounting onto the barbed tip, to assist in preventing retraction of the barbed tip from the animal's ear.

However, the Hayes reference does not disclose or suggest any elongated "strap" for mounting the circuit element 60 onto the livestock animal, or onto any other type of animal or object. Moreover, Hayes also does not disclose or suggest how such "strap" could be or might be supported and retained in a closed loop configuration by a "securement means" which also functions to support and protect an RF "identification circuit", all as recited in applicant's claims as now presented.

Since the Hayes reference does not disclose or suggest a strap of any kind, for any purpose, applicant respectfully contends that there is nothing in the Hayes reference which can be combined with the de Jong reference to support a rejection of applicant's claims for obviousness. At best, if and to the extent that these two references are combined in any obvious way to yield a structure having an elongated band, applicant respectfully submits that such band would be connected to the "holder" in a nonremovable manner, *i.e.*, requiring partial destruction of the holder in order to disassemble it from the strap or band. The Hayes reference contains no hint or suggestion of applicant's claimed concept, namely, a "securement means"

connected to a "strap" for use, but removable therefrom without destruction of the "securement means" to permit re-use with a different strap.

The Ross reference discloses a wristband device having an elongated strap defining a hollow interior within which is mounted a plurality of electronic components including a receiver 30, a battery/switch 32, and a transmitter 34. This strap is designed for removable mounting onto a wearer's wrist by means of a conventional buckle 26 mounted on one end of the strap and adapted for engagement with one of a series of holes formed in the other strap end.

In the Office Action, the examiner appears to recognize that Ross does not position his counterpart RF "identification circuit" within a "securement means", but instead positions the RF "identification circuit" within the strap *per se*. As such, as described in the Background portion of applicant's Specification, the Ross device comprises a good example of the prior art suffering from the disadvantages and deficiencies which are overcome by applicant's invention as disclosed and claimed. That is, following use, Ross's RF "identification circuit" is not "carried by said securement means" [buckle 26]. Moreover, Ross's buckle 26 is not "removably connected" to the strap. Thus, even if one attempted to separate the buckle 26 from the strap in Ross, a corresponding separation of the RF "identification circuit" from the strap would not occur. Instead, following use, Ross's device would simply be discarded in its entirety, including discard of the RF components. This is the exact problem which is overcome by applicant's invention.

The examiner has cited the Peterson and de Jong references in combination with the Ross reference to formulate the second primary rejection for obviousness. In this regard, Peterson shows a wristband device which is visually similar to the one depicted in applicant's FIGS. 1-2, but does not include any RF "identification circuit" on or within the "securement means". Moreover, nothing in the Peterson reference discloses or suggests removable connection of the "securement means" to the strap in a way to permit repeated re-use of the "securement means" and any "identification circuit" which might be carried thereby, *e.g.*, as shown by the de Jong reference. Instead, Peterson shows a deformable mounting post 32 (FIG. 2) which can be staked or splayed apart to anchor one end of the strap, but any attempt to subsequently remove the strap would, if successful, inherently reshape and thereby destroy the mounting post 32 so that a subsequent strap could not be effectively connected thereto.

Thus, the Peterson reference shares the same deficiency as the de Jong reference, namely, that the counterpart "securement means" cannot be separated from the strap or band without partially damaging the "securement means" and thereby rendering it non-re-usable. Accordingly, even if a person skilled in the art attempted to re-located the RF "identification circuit" of Ross to within a "securement means" per de Jong, nothing in the Peterson or de Jong references discloses or suggests applicant's claimed removable connection between the "securement means" and "strap", wherein the "securement means" is undamaged and can be re-used.

The third primary combination of references, namely, the asserted combination of the Peterson, Hayes and de Jong references suffers the

same problems. Neither Peterson nor de Jong contemplates applicant's claimed concept where a "securement means" is nondestructively removable from the associated "strap", for re-use of the "securement means" and the "identification circuit" carried thereby with a replacement strap. The Hayes reference does not disclose or suggest any "strap". Thus, no combination of these three references can support a rejection of applicant's claims for obvious.

Applicant has also reviewed the newly cited Tokunaga (U.S. Patent No. 5,168,281) and Yamanori (U.S. Patent No. 5,986,566) references, and respectfully submits that neither reference includes any teaching or suggestion capable of resolving the above-discussed deficiencies of the primary reference groups. Nothing in these references remotely contemplates applicant's claimed concept where a "securement means" is nondestructively removable from the associated "strap", for re-use of the "securement means" and the "identification circuit" carried thereby with a replacement strap. To the extent that these references depict a wristband antenna and its connection with an electronic receiver carried by the wristband, applicant respectfully notes the absence of any "indicia" (see applicant's claims 36 and 43) on the end of the wristband carrying the antenna for insuring correct component assembly.

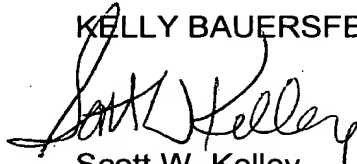
In view of the foregoing remarks, applicant respectfully submits that the cited art does not disclose or suggest the invention as now recited in claims 30-44.

CONCLUSION

In conclusion, in view of the foregoing newly submitted claims and the accompanying remarks, claims 30-44 are resubmitted for reconsideration and allowance. A Notice of Allowance is believed to be in order, and is therefore respectfully requested.

Respectfully submitted,

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